

I Claim:

sub A9 1. A method for creating a dummy metal fill pattern near functional circuitry, comprising:

- 2 a. creating a margin area around the functional circuitry;  
3 b. trimming a dummy fill pattern to the margin area to create a trimmed fill pattern; and  
4 c. overlaying said trimmed fill pattern and the functional circuitry.

sub C7 2. The method for creating a dummy metal fill pattern of claim 1, and further including:  
2 removing excess metal between step b and step c.

1 3. The method for creating a dummy metal fill pattern of claim 2, wherein:  
2 the excess metal is at least one metal sliver.

1 4. The method for creating a dummy metal fill pattern of claim 3, wherein:  
2 the metal sliver is a thin strip of metal created when the margin area is removed from the  
3 dummy fill pattern.

1 5. The method for creating a dummy metal fill pattern of claim 1, wherein:  
2 the dummy fill pattern is an example of an alternative functional circuitry.

sub A9 1 6. The method for creating a dummy metal fill pattern of claim 5, wherein:  
2 the alternative functional circuitry is selected to be alike to that near the functional  
3 circuitry.

1 7. The method for creating a dummy metal fill pattern of claim 5, wherein:  
2 the alternative functional circuitry is a selected portion of functional circuitry from a metal  
3 layer on which the dummy metal fill pattern is to be used.

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8. The method for creating a dummy metal fill pattern of claim 1, wherein:  
the dummy metal fill pattern is created on a metal layer of an LCOS array.

9. The method for creating a dummy metal fill pattern of claim 1, wherein:  
the dummy metal fill pattern is created on a layer under a mirror layer of an LCOS array.

10. The method for creating a dummy metal fill pattern of claim 1, wherein:  
the dummy metal fill pattern is created on a layer of a reflective LCOS array.

11. The method for creating a dummy metal fill pattern of claim 1, and further including:  
selecting a fill metal pattern between step a and step b.

12. The method for creating a dummy metal fill pattern of claim 11, wherein:  
the fill metal pattern is selected to be a pattern of alternative functional circuitry.

13. The method for creating a dummy metal fill pattern of claim 1, wherein:  
said margin area is created by growing the area of the functional circuitry.

14. A metal fill pattern comprising:  
a first circuitry pattern;  
a margin area around said first circuitry pattern; and  
a second circuitry pattern, wherein:  
said second circuitry pattern is trimmed to avoid the margin area.

15. The metal fill pattern of claim 13, wherein:  
the first circuitry pattern is functional circuitry.

16. The metal fill pattern of claim 14, wherein:  
the second circuitry pattern is electrically non-functional.

1 17. The metal fill pattern of claim 14, wherein:  
2 the second circuitry pattern is selected to be a functional circuitry pattern located near the  
3 first circuitry pattern on a metal layer.

1 18. The metal fill pattern of claim 14, wherein:  
2 said first circuitry pattern and said second circuitry pattern are patterns on a metal layer of a  
3 reflective LCOS array.

1 19. The metal fill pattern of claim 14, wherein:  
2 said first circuitry pattern and said second circuitry pattern are patterns on a single metal  
3 layer of a reflective LCOS array.

1 20. The metal fill pattern of claim 14, wherein:  
2 at least one is artifact removed from the second circuitry pattern.

1 21. The metal fill pattern of claim 20, wherein:  
2 the artifact includes a metal sliver remaining after said second circuitry pattern is trimmed.

1 22. The metal fill pattern of claim 14, wherein:  
2 the second circuitry pattern is a functional circuitry pattern which is used as dummy fill  
3 metal.

1 23. A method for providing dummy fill in a LCOS array, comprising:  
2 selecting a metal fill pattern from functional circuitry on a layer of the array; and  
3 filling an unfilled area with the metal fill pattern.

1 24. The method for providing dummy fill of claim 23, and further including:  
2 filling a partially filled area with a portion of the metal fill pattern.

NOTICE: This correspondence chart is provided for informational purposes only. It is not a

15 part of the official Patent Application.

CORRESPONDENCE CHART

10 METHOD FOR CREATING DUMMY FILL METAL  
20 11 REFLECTIVE LCOS ARRAY  
12 MATERIAL LAYERS  
14 MIRROR LAYER  
16 M1 METAL LAYER  
18 M2 METAL LAYER  
25 20 M3 METAL LAYER  
22 POLY LAYER  
24 DIFFUSION LAYER  
26 SEMICONDUCTOR JUNCTION  
28 INSULATING LAYERS  
30 29 CIRCUITRY AREA  
31 UNFILLED AREA  
30 PORTION OF EXAMPLE METAL LAYER  
32 FUNCTIONAL CIRCUITRY  
34 MARGIN AREA  
35 38 FILL AREA  
40 FUNCTIONAL CIRCUITRY AREA  
50 METAL FILL PATTERN  
52 FILL METAL TRACES  
54 UNFILLED SPACE  
40 55 SELECT METAL FILL PATTERN OPERATION  
56 MODIFY METAL FILL PATTERN OPERATION  
57 FILL UNFILLED AREAS OPERATION  
58 FILL PARTIALLY FILLED AREAS OPERATION

- 59 GROW MARGIN AREA OPERATION
- 45 60 TRIM DOWN TO MARGIN OPERATION
- 62 FIRST TRIMMED FILL PATTERN
- 64 FIRST TRIMMED METAL TRACES
- 66 METAL SLIVER
- 70 REMOVE DUMMY SLIVERS OPERATION
- 50 72 SECOND TRIMMED FILL PATTERN
- 74 SECOND TRIMMED METAL TRACES
- 76 COMPLETED METAL TRACE PATTERN
- 78 OVERLAY FUNCTIONAL AND DUMMY PATTERNS OPERATION